International Standard 4384/1

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Plain bearings — Hardness testing of bearing metals — Part 1 : Compound materials

Paliers lisses — Essai de dureté des matériaux antifriction — Partie 1 : Matériaux multicouches

First edition — 1982-01-15

UDC 669.018.24-419 : 620.178.1 **Ref. No. ISO 4384/1-1982 (E)**

Descriptors : bearing alloys, composite materials, tests, hardness tests.

Price based on 2 pages

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 4384/1 was developed by Technical Committee ISO/TC 123, *Plain bearings*, and was circulated to the member bodies in September 1978.

It has been approved by the member bodies of the following countries:

Australia	Italy	South Africa, Rep. of
Chile	Korea, Rep. of	Spain
Czechoslovakia	Libyan Arab Jamahiriya	Sweden
France	Mexico	United Kingdom
Germany, F. R.	Netherlands	USA
India	New Zealand	USSR
Ireland	Poland	Yugoslavia

No member body expressed disapproval of the document.

Printed in Switzerland

Plain bearings — Hardness testing of bearing metals — Part 1 : Compound materials

1 Scope and field of application

This International Standard specifies parameters for the hardness testing of compound materials for plain bearings made from steel and bearing metal with bearing metals based on lead, tin, copper, and aluminium, manufactured by casting, sintering, or plating. It represents a supplement to the existing ISO publications on hardness testing and therefore includes only the extensions and restrictions to be observed as compared to those publications.

The measuring method applied depends on the bearing metal layer thickness, its hardness and its structure.

Owing to the heterogeneous structural composition of the majority of these bearing metals, a Brinell test is to be preferred. The Vickers measurement should be used in the case of very small layer thicknesses.

2 References

ISO 409/1, *Metallic materials — Hardness test — Tables of Vickers hardness values for use in tests made on flat surfaces — Part 1 : HV 5 to HV 100.*[1]

ISO 410, *Metallic materials — Hardness test — Tables of Brinell hardness values for use in tests made on flat surfaces.*[2]

ISO 6506, *Metallic materials — Hardness test — Brinell test.*[3]

ISO 6507/1, *Metallic materials — Hardness test — Vickers test — Part 1 : HV 5 to HV 100.*[4]

3 Specimen

The surface of the specimen in the test area shall be metallic bright and conditioned in such a way that a satisfactory measurement of the test impression is possible. During the preparation of the specimens, it shall be ensured that the material is not heated.

The test surface may be plane or curved. ISO 409/1 includes correction factors for cylindrical surfaces.

4 Procedure

The test conditions shall be according to the following table.

1) At present at the stage of draft. (Revision of ISO/R 409-1964.)

2) At present at the stage of draft. (Revision of ISO/R 410-1964.)

3) At present at the stage of draft. (Revision of ISO/R 79-1968, ISO/R 191-1971 and ISO/R 403-1964.)

4) At present at the stage of draft. (Revision of ISO/R 81-1967, ISO/R 192-1971 and ISO/R 399-1964.)